Actiontec®

ScreenBeam™ Wireless Display Receiver

Model #s SWD100E2V,
SBWD100E2X,
and SBWD100SMBV

User Guide v2

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Introduction 1

Thank you for purchasing Actiontec's ScreenBeam™ Wireless Display Receiver. The Receiver wirelessly streams what's on your Intel WiDi or Miracast™ compatible device to your HDTV, including movies, videos, photos, music, and more.

The Receiver features fast setup, enhanced security and IT manageability, smooth video playback, full 1080p HD support, ultra-low delay, Windows 8.1 optimization, versatile compatibility, low power consumption.

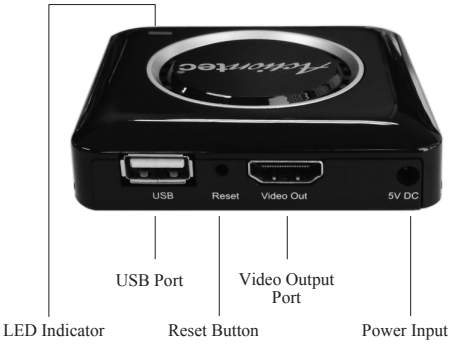
This user manual will take you through the procedures needed to install, connect to, operate, configure, and upgrade the Receiver, and also describe a few different possible scenarios about locating faults.

Package Contents

The following items are in the ScreenBeam™ Wireless Display Receiver package:

- ScreenBeam™ Wireless Display Receiver (1)
- HDMI Cable (1)
- HDMI-to-VGA adapter (1)
- AC power adapter (1)
- Quick Start Guide

Features



- **Reset Button**: resets the Receiver to its default settings
- **Video Out Port (HDMI)**: connects the Receiver to HDTV/projector for video and audio output.
- **Power Input**: connects to AC adapter
- **LED Indicator**: displays status of power supply
- **USB Port**: used for firmware upgrades

System Requirements

- Display device with one Type A HDMI port or VGA port
- Available power outlet

Compatible Devices

- Laptop or notebook computer with Intel WiDi 4 or higher
- Smartphone, tablet, or laptop running Windows 8.1
- Wi-Fi Miracast™ certified smartphones and tablets
- Non-WiDi/Miracast-ready laptops and PCs with Actiontec USB Transmitter (Windows 7 or higher)

Setting Up the Receiver

2

This chapter details how to connect the Receiver to an HDTV monitor, and how to set it up for the first time. Make sure you have all the contents from the Receiver's package available before beginning the installation.

Connecting to an HDTV Monitor

To connect the Receiver to an HDTV monitor, make sure the following items are available:

- ScreenBeam™ Wireless Display Receiver
- HDMI cable
- AC power cord

To connect the Receiver to an HDTV monitor:

1. Plug one end of the supplied HDMI cable into the HDMI port (Video Out) on the Receiver, and the other end into an available HDMI port on the monitor.
2. Plug the other end of the power cord into a nearby electrical outlet. The Power LED will illuminate green.

When Steps 1 and 2 are complete, the hardware should be connected as shown in the figure below:

3. Turn on the HDTV monitor and set it to display the input from the HDMI port connected in step 1.

4. Verify that the *Ready To Connect* screen appears on the monitor.

The Receiver is now connected to the monitor, and is ready to use.

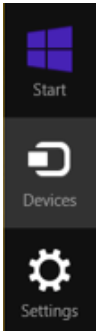
Setting Up for the First Time

This section explains how to connect the Receiver for the first time to a source device. The source device options must be running one of the following operating systmes: Windows 8.1, Intel WiDi, and Miracast™.

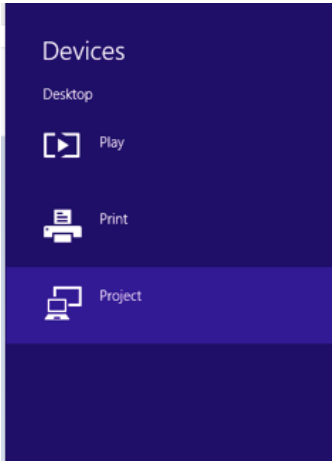
Windows 8.1

To connect to a source device running Windows 8.1:

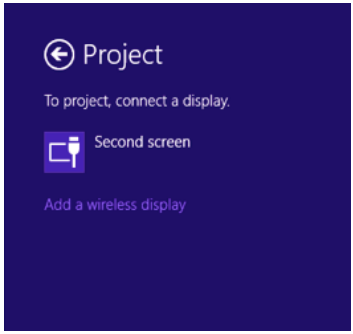
1. From the Windows desktop, go to the *Charms* menu and select **Devices**. You can also use the shortcut keys (Windows logo + K).



2. When the *Devices* menu appears, select **Project**.



3. When the *Project* menu appears, select **Add a wireless display**. Windows will search for available devices.

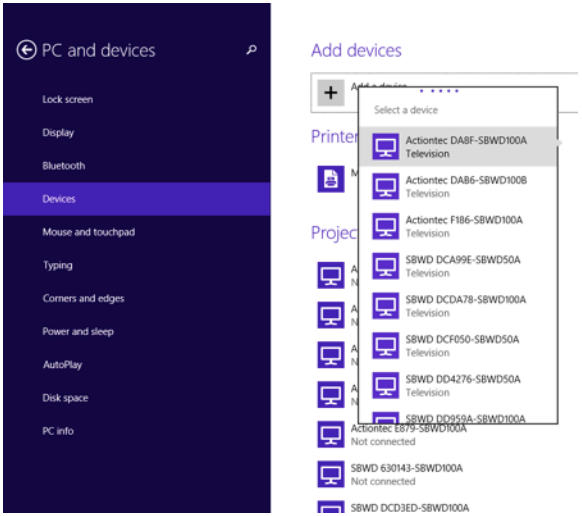


Note: If the device is running Windows 8.1 and the previous screens do not appear, go to

http://www.actiontec.com/widi81

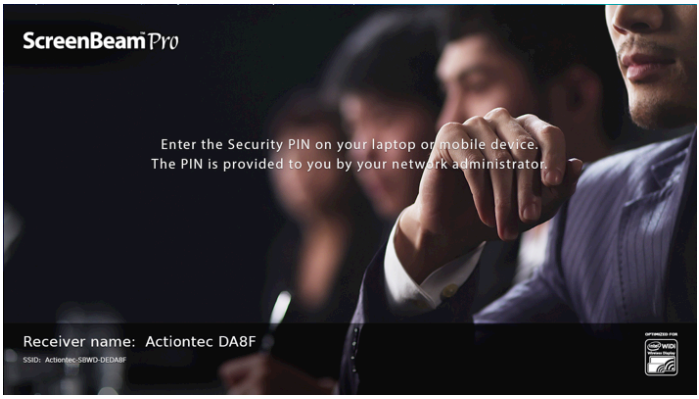
to update the software. Alternatively, the Windows 8.1 device can be updated via the Windows Update application.

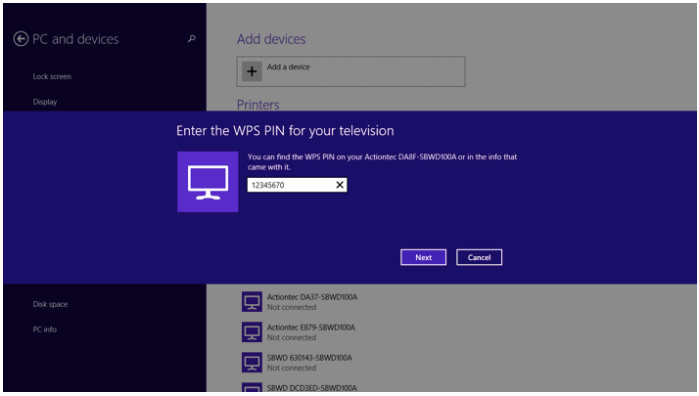
4. A *PC and devices* screen appears. Click **Devices** and, from the list that appears, select the appropriate Receiver.



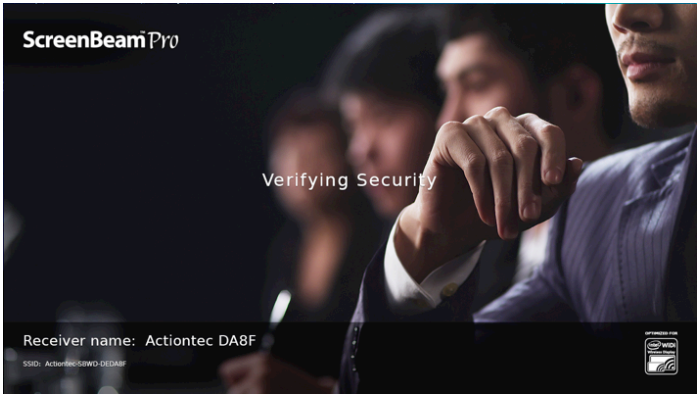
5. A PIN entry box is displayed on the screen of the Windows 8.1 device and a PIN entry countdown on the monitor. Type the PIN provided by the network administrator in the PIN entry box and click **Next** to continue.

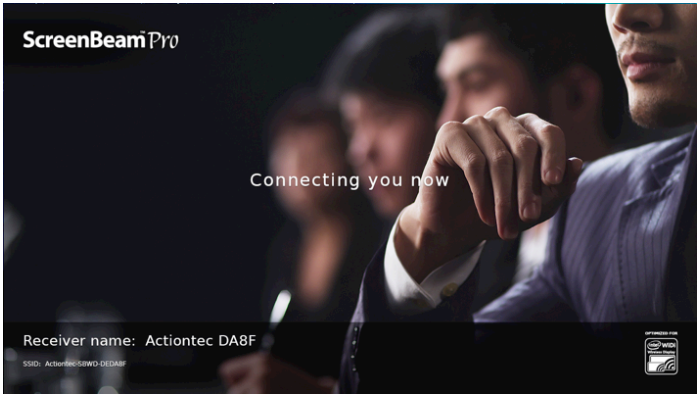
Note: Obtain the security PIN from the network administrator if no PIN is displayed on the connected display device. By default, the security PIN is "12345670." If a PIN is displayed on the connected display device (see lower figure), type this PIN in the PIN entry box.


ScreenBeam Pro
Enter the Security PIN on your laptop or mobile device.
The PIN is provided to you by your network administrator.
Receiver name: Actiontec DA8F
SSID: Actiontec-SBWD-DEDA8F



6. The monitor displays messages to show the status of the connection.





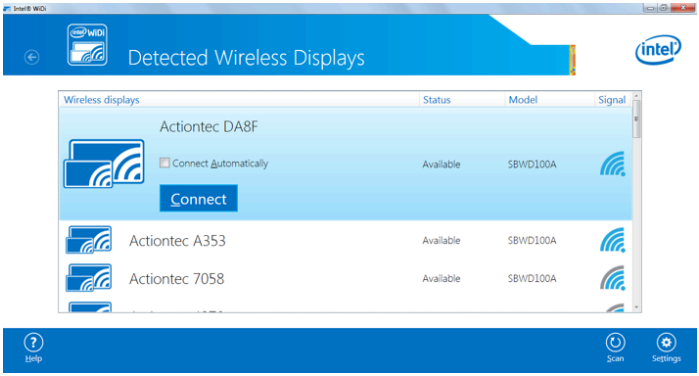
7. When the device's screen is displayed on the monitor, the source device has connected to the Receiver.

Intel WiDi

To connect to a source device running Intel WiDi:

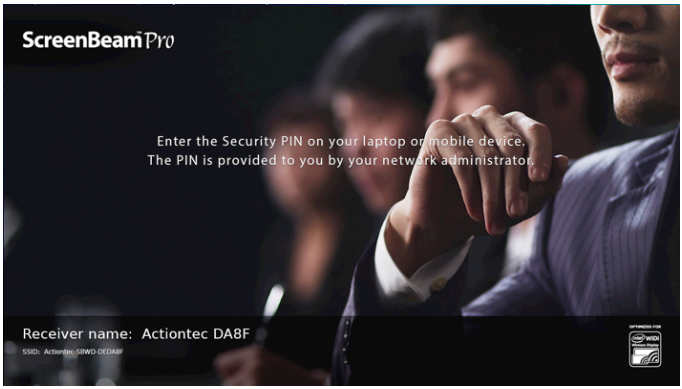
1. Launch the **Intel Wireless Display** application on the device. To find the application, go to **Windows Search** on the device and search for "Intel WiDi."

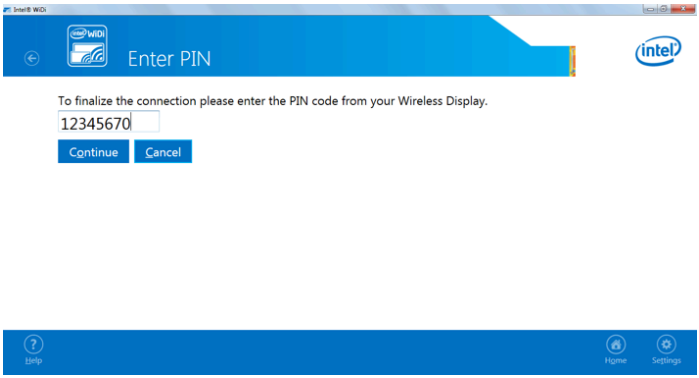
2. The application scans for available Receivers automatically. Select the appropriate Receiver and click **Connect**. (The *Connect Automatically* checkbox is optional.) If the Receiver is not listed, click **Scan**.



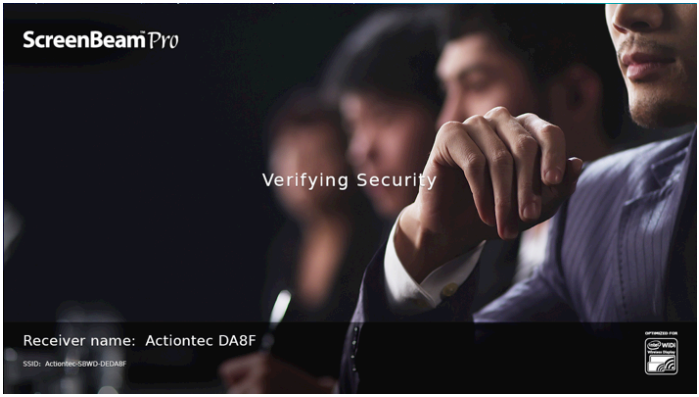
3. A PIN entry box is displayed on the WiDi device's screen, and a PIN entry countdown on the monitor. Type the PIN provided by the network administrator in the PIN entry box on the WiDi device, then click **Continue**.

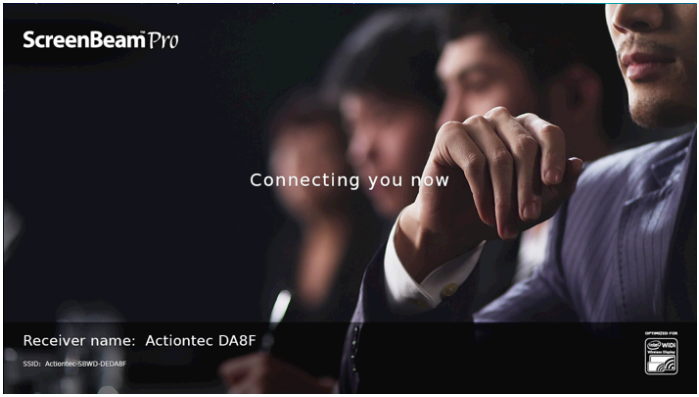
Note: Obtain the security PIN from the network administrator if no PIN is displayed on the connected display device. By default, the security PIN is "12345670." If a PIN is displayed on the connected display device (see lower figure), type this PIN in the PIN entry box.


ScreenBeam Pro
Enter the Security PIN on your laptop or mobile device.
The PIN is provided to you by your network administrator.
Receiver name: Actiontec DA8F

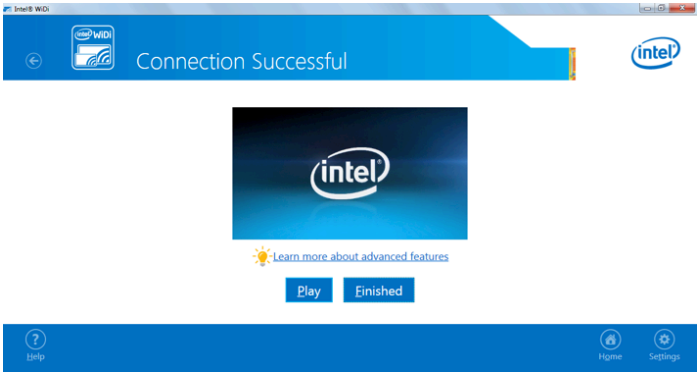


4. The monitor displays messages to show the status of the connection.





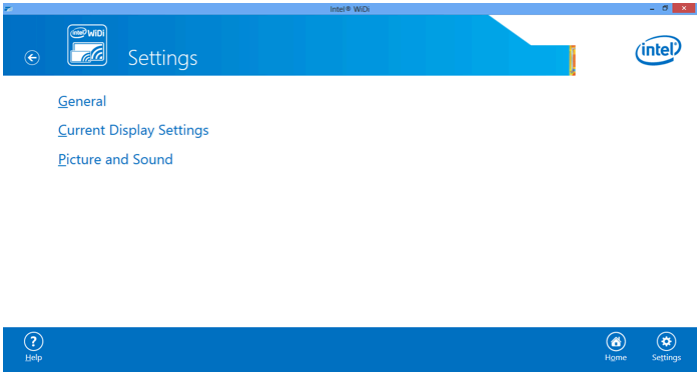
5. A *Connection Successful* screen appears on the source device's screen. Click **Finished**, and the device's screen is displayed on the monitor.



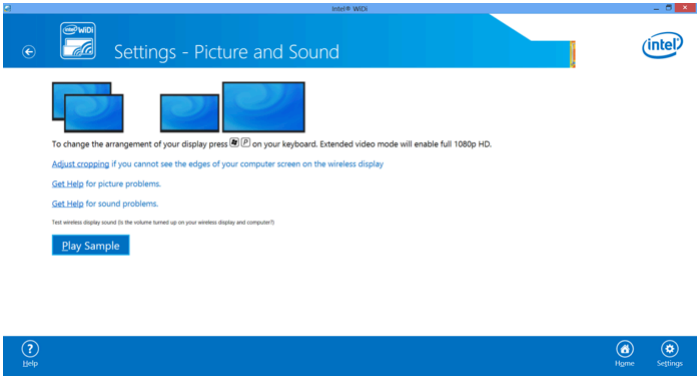
Adjusting the Monitor's Picture

If edges of the source device's screen cannot be seen on the monitor, or there are black bars around the picture, the Receiver's cropping settings can be adjusted. To do this:

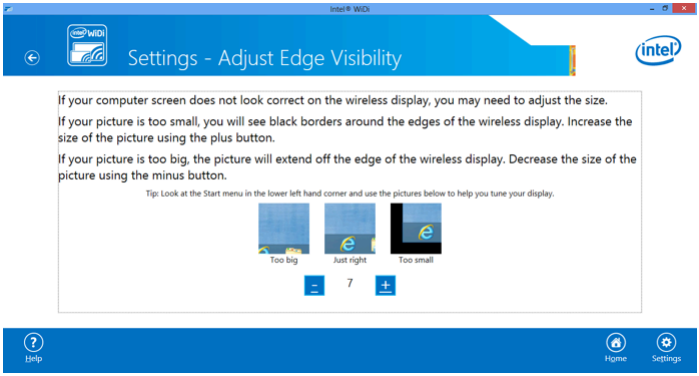
1. From the Intel WiDi application, click **Settings**. The *Settings* screen appears.



2. In the *Picture and Sound* section, select **Adjust cropping**.


Settings - Picture and Sound
To change the arrangement of your display press on your keyboard. Extended video mode will enable full 1080p HD.
Adjust cropping if you cannot see the edges of your computer screen on the wireless display
Get Help for picture problems.
Get Help for sound problems.
Play Sample
Help
Home
Settings

3. Adjust the monitor's picture by clicking + (plus sign) or - (minus sign).

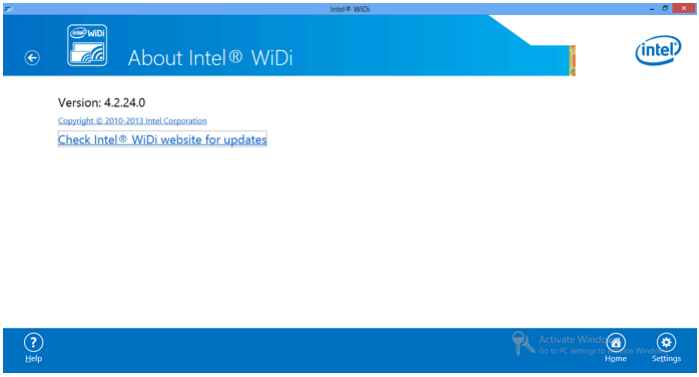

Settings - Adjust Edge Visibility
If your computer screen does not look correct on the wireless display, you may need to adjust the size.
If your picture is too small, you will see black borders around the edges of the wireless display. Increase the size of the picture using the plus button.
If your picture is too big, the picture will extend off the edge of the wireless display. Decrease the size of the picture using the minus button.
Tip: Look at the Start menu in the lower left hand corner and use the pictures below to help you tune your display.
Too big
Just right
Too small
7
Help
Home
Settings

WiDi Software Version Support

Make sure the device supports Intel Wireless Display (WiDi) software version 3.5 or higher. To find out which version of Intel WiDi the device is running, launch the Intel WiDi application and click **Help**, then navigate to the *About Intel® WiDi* section. To obtain the latest Intel WiDi software and drivers, go to:

http://www.intel.com/go/wirelessdisplayupdate

or click **Check Intel® WiDi website for updates**.



Miracast™

To connect a Miracast™-enabled Android device to the Receiver, use the following procedure. For best performance, the Miracast™ device should be running the latest software.

1. On a Miracast™-enabled Android device, locate and open the Wireless Display Application (check for the application under *Settings*).

   Note: The name of the Wireless Display application depends on the device type and model. Refer to the device's user manual for more details.

2. The Wireless Display application scans for available devices. Select the Receiver from the device list. A PIN may be required.

   Note: Obtain the security PIN from the network administrator if no PIN is displayed on the connected display device. By default, the security PIN is "12345670." If a PIN is displayed on the connected display device, enter this PIN in the PIN text box.

3. Enter the PIN in the PIN text box, then click **Connect**.

4. Wait for the device to pair with and connect to the Receiver. When it does, the source device's screen will be displayed on the monitor.

Tips for Optimal Performance

To get the most out of the Receiver:

- Keep the Receiver in line-of-sight in relation to the source device. This will help ensure the Receiver receives the best possible signal.
- The Receiver's optimal wireless range is within 30 feet of the source device. However, actual range and effectiveness depends on many factors, including the amount of existing signal interference and the building materials used in the surrounding structure.
- Avoid placing the Receiver near other possible sources of interference (such as electric fans or other devices with electric motors), microwave ovens, and cordless phones.

Display and Control Options

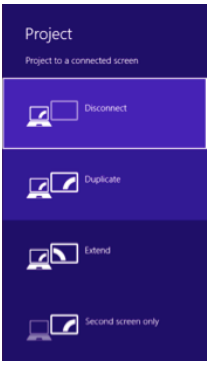
3

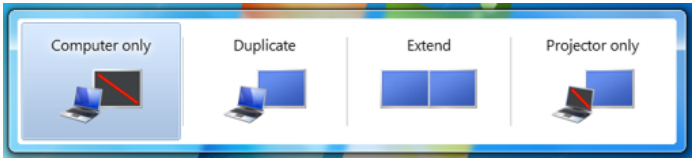
This chapter describes the various display modes and control options supported by the Receiver.

Display Mode

The Receiver supports three display modes when connected with a compatible wireless display application (Intel WiDi or Windows 8.1 Project, for example).

In Windows, press the Windows logo + P keys on the keyboard simultaneously to launch the display options and select the desired display mode from the options.





Duplicate

The *Duplicate* mode is used to display the same content on both the device's screen and the HDTV simultaneously.

Note: There may be minor delay between the content displayed on the monitor compared to the source device's screen. This is due to the current state of wireless display technology.

Extend

The *Extend* mode creates a single, extended "screen" between the source device and the monitor. When in Extend mode, dragging windows to the right side of the device's screen displays those windows on the monitor, while dragging windows to the left of the monitor displays them back on the device's screen. This mode allows users to display selected content on the monitor, while all other windows remain on the device's screen. When this mode is first selected, the monitor displays only the Windows desktop.

Second Screen Only

The *Second Screen Only* mode causes the monitor to be the only display for the device. All content will be displayed on the monitor; the source device's screen will be blank.

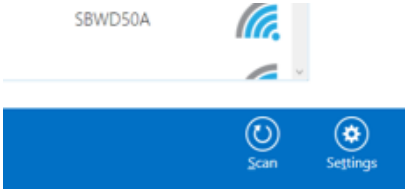
Ultra-Low Delay

The Receiver also supports Ultra-Low Delay mode, which helps reduce end-to-end wireless display latency. Real-time applications, such as games, can run without noticeable delay when Ultra-Low Delay mode is enabled on supported devices.

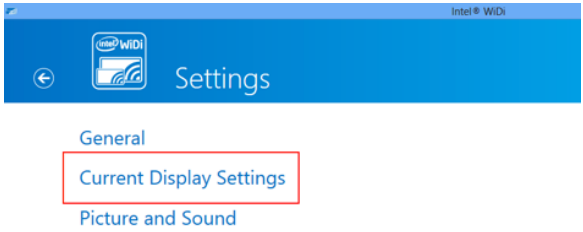
Intel WiDi

Ultra-Low Delay is only available on a source device running Intel WiDi 3.5 or higher. Follow the steps below to switch to ultra-low delay mode:

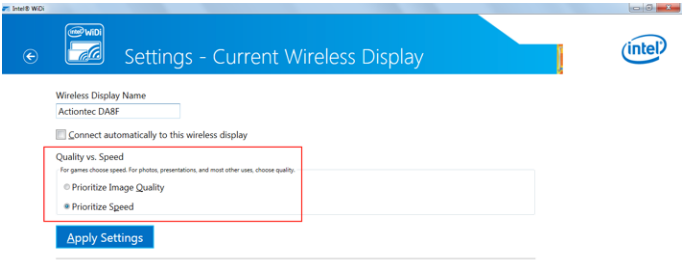
1. Launch the Intel WiDi application, connect to the Receiver, then click **Settings**.



2. In the *Settings* screen, select **Current Display Settings**.



3. Select **Prioritize Speed** in the *Quality vs. Speed* section, then click **Apply Settings**.



For more information, see Intel's support documentation.

Restore Default Settings

To restore the Receiver's default settings:

1. Power on the Receiver and wait until the *Ready to Connect* screen appears.
2. Hold down the Receiver's *Reset* button with the end of a paper clip.
3. When the *Reset to Default* screen appears on the monitore, release the *Reset* button.

The Receiver reboots. When it finishes, it will running with its default settings.

Advanced Settings

4

This chapter details the procedures to upgrade the the Receiver's firmware, in addtion to other advanced settings. The Receiver provides a local management web server to access advanced settings. With the web server, IT administrators can setup, configure and upgrade the Receiver. These settings should only be accessed by an experienced network technician.

Logging Into the Web Server

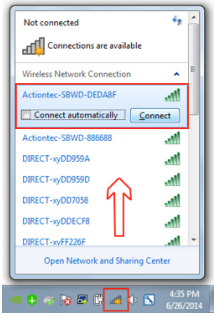
There are two ways to log into the Receiver's web server: when SSID broadcast is enabled, and when it is disabled.

SSID Broadcast Enabled

Follow the procedure below to log into the local management web server when SSID broadcast is enabled:

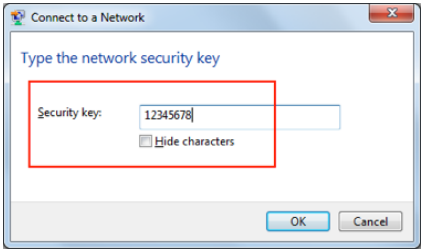
1. Find the Receiver's SSID in the lower left corner of the *Ready To Connect* screen.

2. Connect to the Receiver's SSID from a wireless-enabled laptop (or other device with Wi-Fi access ability and a web browser).



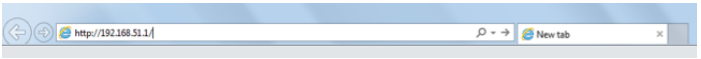
3. Enter the network security key in *Security key* text box of the *Connect to a Network* dialog box, then click **OK**.

Note: The default network security key is "12345678."



4. A URL is displayed on the connected HDTV monitor. After a few seconds, the URL will be displayed in the lower left-corner of the screen.

5. Enter the URL in the address bar of a web browser on a computer connected to the same network.



6. The web server login screen appears. Type the user name and password in the appropriate text boxes and click **Login**.

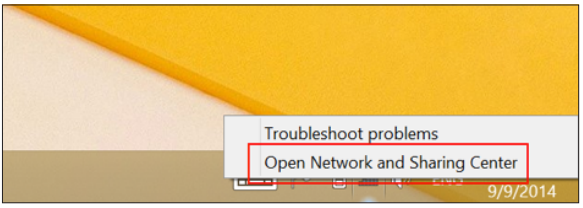
Note: The default username is "Administrator" and the default password is "Actiontec." Both the user name and password are case sensitive.

SSID Broadcast Disabled

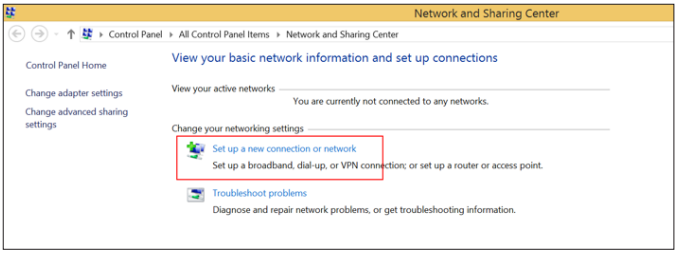
Follow the procedure below to log into the local management web server when SSID broadcast is disabled:

1. Find the Receiver's SSID in the lower left corner of the *Ready To Connect* screen.

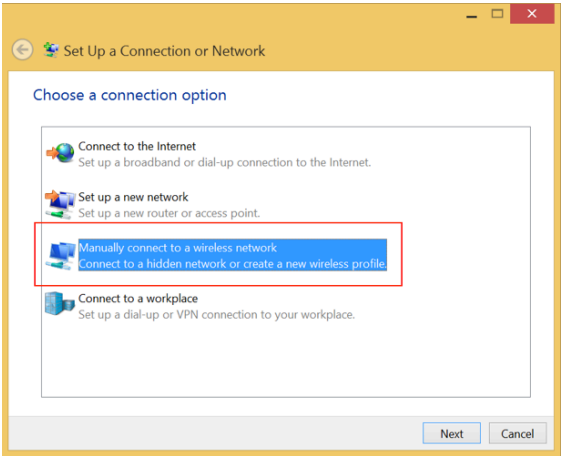
2. Right-click the Wi-Fi network icon on the taskbar and select **Open Network and Sharing Center**.



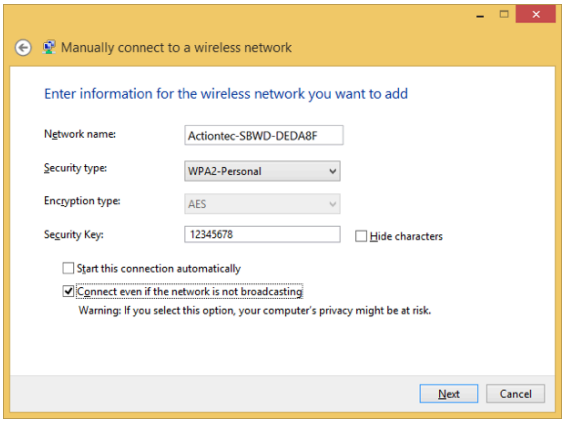
3. The *Network and Sharing Center* window appears. Click **Set up a new connection or network**.


Network and Sharing Center
Control Panel ▸ All Control Panel Items ▸ Network and Sharing Center
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
View your active networks
You are currently not connected to any networks.
Change your networking settings
Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.

4. The *Set Up a Connection or Network* window appears. Select **Manually connect to a wireless network**.

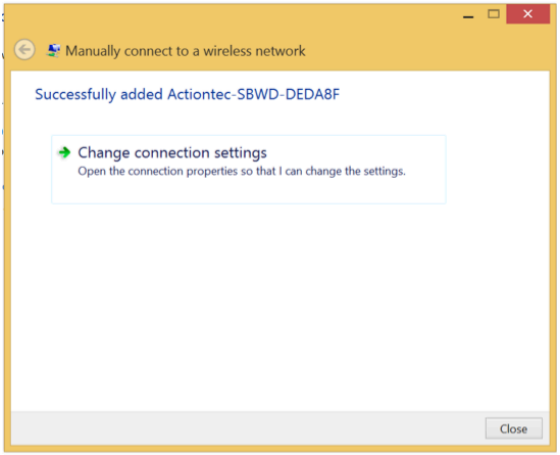

Set Up a Connection or Network
Choose a connection option
Connect to the Internet
Set up a broadband or dial-up connection to the Internet.
Set up a new network
Set up a new router or access point.
Manually connect to a wireless network
Connect to a hidden network or create a new wireless profile.
Connect to a workplace
Set up a dial-up or VPN connection to your workplace.
Next
Cancel

5. The *Manually connect to a wireless network* window appears. Enter or select the following:
Network name: the SSID of the Receiver to be connected.
Security type: WPA2 Personal
Encryption type: AES
Security key: 12345678 (default key)



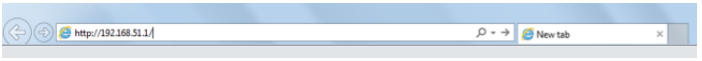
6. Click in the *Connect even if the network is not broadcasting* checkbox, then click **Next**.

7. In the next window, click **Close**.

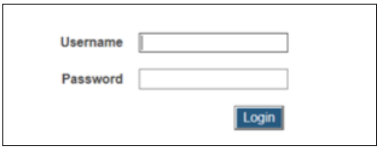

Manually connect to a wireless network
Successfully added Actiontec-SBWD-DEDA8F
Change connection settings
Open the connection properties so that I can change the settings.
Close

8. A URL is displayed on the monitor. After a few seconds, the URL will be displayed in the lower left-corner of the screen.

9. Enter the URL in the address bar of a web browser on a computer connected to the same network.



10. The web server login screen appears. Type the user name and password in the appropriate text boxes and click **Login**.



Note: The default username is "Administrator" and the default password is "Actiontec." Both the user name and password are case sensitive.

Logging Out

To log out from the web server, click **Logout** from any web server screen, then click **Yes**.

Configuring the Receiver

After logging into the web server, you can access the the Receiver advanced settings through the web browser.

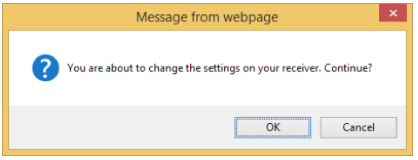
Renaming the Receiver

1. Click **Device Configuration** from any web server screen. The *Device Configuration* screen appears.

2. Click in the *Enable* button next to *Device Name Access*.

3. Enter a new name in the "Device Name" text box. Apostrophes (‘), dashes (-), and quotation marks (“) cannot be used in the device name

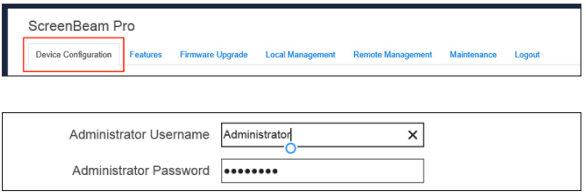
4. Click **Apply**, then click **OK** in the pop-up window.



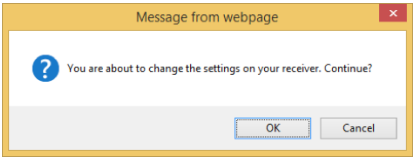
The new settings take effect immediately.

Changing the Username and Password

1. Click **Device Configuration** from any web server screen, then enter a new username and password in the *Administrator Username* and *Administrator Password* text boxes, respectively.



2. Click **Apply**, then click **OK** in the pop-up window.

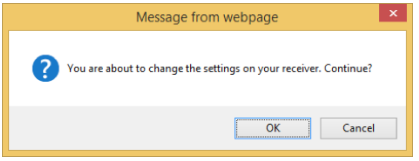


The user name and password have been changed.

Changing the Language

1. Click **Device Configuration** from any web server screen, then select a language from the *Display Language* drop-down menu. Currently available languages are English, French, Italian, Japanese, Simplified Chinese, Traditional Chinese, Russian, Spanish, and German.

2. Click **Apply**, then click **OK** in the pop-up window.

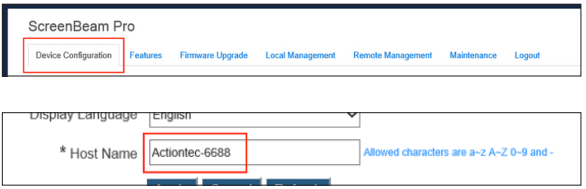


After the Receiver reboots, the language is changed.

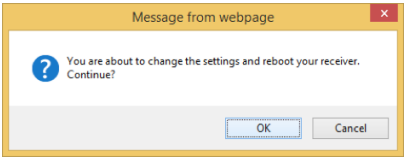
Changing the Receiver's Host Name

The Receiver's host name is for DNS discovery, which is used for connecting a receiver to the ScreenBeam Central Management System.

1. Click **Device Configuration** from any web server screen, and enter a new host name in the *Host Name* text box.



2. Click **Apply**, then click **OK** in the pop-up window.



The new host name takes effect after the Receiver reboots.

Setting Up PIN Pairing

1. Click **Features** from any web server screen, and set the *Force PIN Pairing on First Connection* feature On or Off.

Force Pin Pairing on First Connection

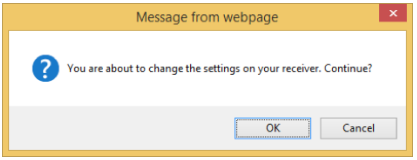
On - Select "On" to enable the PIN enforcement function. In this case, you must enter a PIN code on the device connecting to The Receiver for the first time. When this function is enabled, the system provides two PIN generation methods: Random and Static.
Off - Select "Off" to disable the PIN enforcement function. PIN entry or PBC is used when connecting your device to the receiver for the first time.

Pin Generation Method

Random - causes a randomly generated PIN to be created by The Receiver, which will be displayed on the HDTV or projector screen.
Static - allows the user to create a custom PIN. Enter the seven digits in the "Static" text box, then click **Apply**. The Receiver creates an eight-digit PIN and displays it in the "Static PIN" text box. This PIN will not be displayed on any connected display.

Note: Some source devices may not support PIN entry and may not be able to connect with The Receiver if this mode is enabled. Refer to the device's user manual for detail about enabling the PIN connection.

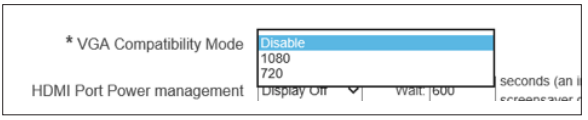
2. Click **Apply**, then click **OK** in the pop-up window.



The PIN Pairing option has been changed.

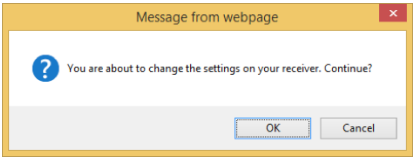
Setting Up VGA Compatibility Mode

1. Click **Features** from any web server screen, and then, in the *VGA Compatibility Mode* list box, select the desired option.



Disable - the video output is consistent with the source device.
1080 - the video output is set to 1080p or 1080i, depending on the connected display.
720 - the video output is set to 720p or 720i, depending on the connected display.
Note: VGA Compatibility Mode is not available when HDMI-CEC is enabled.

2. Click **Apply**, then click **OK** in the pop-up window.

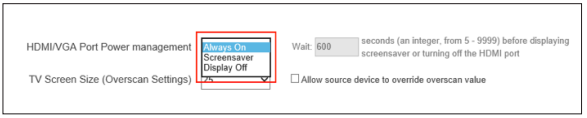


The VGA Compatibility Mode has been changed.

Managing HDMI/VGA Port Output

To set up HDMI/VGA port output:

1. Click **Features** from any web server screen, and then, in the *HDMI/VGA Port Power management* list box, select the desired option.

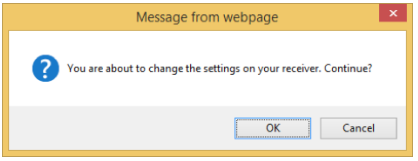

HDMI/VGA Port Power management
Always On
Screensaver
Display Off
Wait: 600
seconds (an integer, from 5 - 9999) before displaying screensaver or turning off the HDMI port
TV Screen Size (Overscan Settings)
Allow source device to override overscan value

Always On - the HDMI output is always on.
Screensaver - the system runs the screensaver after the defined idle time expires. Define the idle time in the *Wait* text box.

HDMI/VGA Port Power management
Screensaver
Wait: 600
seconds (an integer, from 5 - 9999) before displaying screensaver or turning off the HDMI port

Display Off - the system turns the HDMI/VGA output off after the defined idle time expires. Define the idle time in the *Wait* text box.

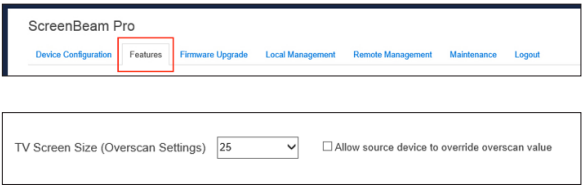
2. Click **Apply**, then click **OK** in the pop-up window.



The HDMI/VGA output setting has been changed.

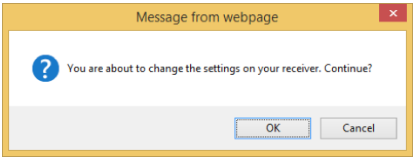
Adjusting Screen Size

1. Click **Features** from any web server screen, and then, in the *TV ScreenSize (Overscan Settings)* list box, select the desired option.



TV Screen Size (Overscan Settings) - selecting a value changes the size of the display on the screen; a larger value causes a larger screen.
Allow source device to override overscan value - enabling this option causes the overscan value to stay consistent with the setting on the source device.

2. Click **Apply**, then click **OK** in the pop-up window.



The Screen Size setting has been changed.

One Touch Play (HDMI-CEC)

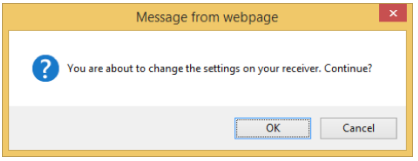
One Touch Play enables the Receiver to wake up the connected display and switch automatically to the connected source. To set up One Touch Play, click **Features** from any web server screen, then turn *One Touch Play (HDMI-CEC)* **On** or **Off**.

Once One Touch Play has been activated, the display device will wake when one of the following events occurs:

- The Receiver is powered up
- a connection to the Receiver is established
- a powered-up Receiver is connected to the display

Note: To use this function, the display must support HDMI-CEC.

After finishing with this setting, click **Apply**, then click **OK** in the pop-up window.



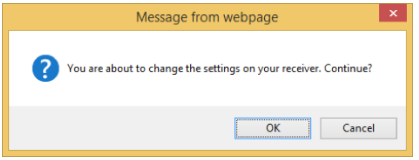
The One Touch Play setting has been changed.

Setting Up HDCP Encryption

1. Click **Features** from any web server screen, and then, in the *HDCP Encryption* list box, select the desired option.

Enable - enables HDCP encryption to secure HDCP-protected media.
Disable - disables HDCP encryption. HDCP-protected media cannot be played, but connection speed and compatibility is improved.
Demo Mode - reserved.

2. Click **Apply**, then click **OK** in the pop-up window.



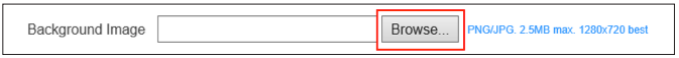
The HDCP encryption setting has been changed.

Updating the Background Image

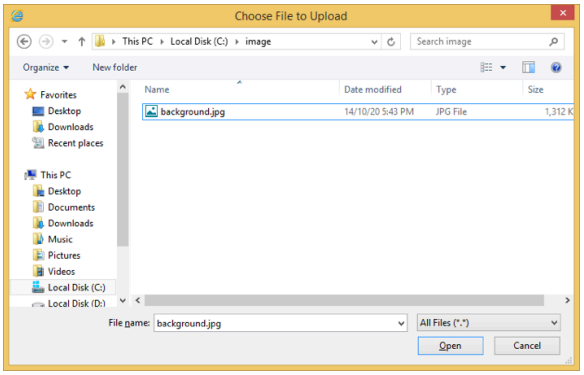
To update the Receiver's background image:

1. Click **Features**.

2. The *Features* window appears. Scroll down to the *Background Image* section, then click **Browse**.



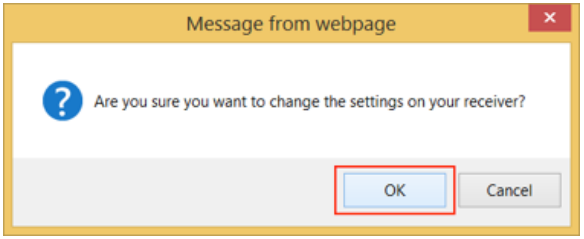
3. The *Choose File to Upload* window appears. Select an image for the screen-saver, then click **Open**.



The image must be a .png or .jpg/.jpeg file and not exceed 2.5 MB in size, with optimal dimensions of 1280 x 720 pixels (width x height).

4. Click **Apply**.

5. In the *Message from webpage* window that appears, click **OK**.



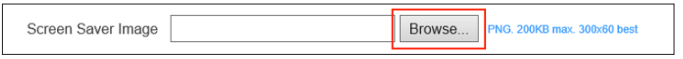
The Background Image setting is configured.

Updating the Screensaver Image

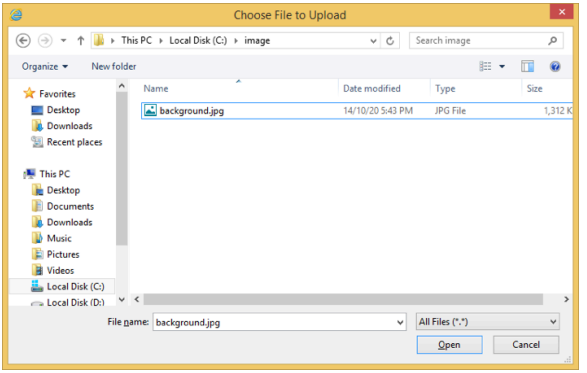
To update the Receiver's screensaver image:

1. Click **Features**.

2. The *Features* window appears. Scroll down to the *Screen Saver Image* section, then click **Browse**.



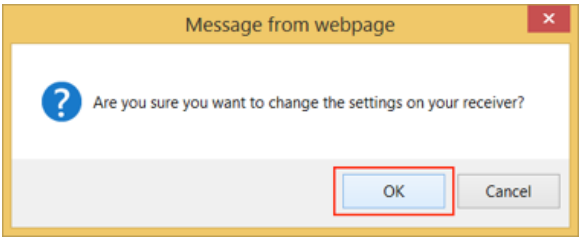
3. The *Choose File to Upload* window appears. Select an image for the screensaver, then click **Open**.



The image must be a .png file and not exceed 200 KB in size, with optimal dimensions of 300 x 60 pixels (width x height).

4. Click **Apply**.

5. In the *Message from webpage* window that appears, click **OK**.

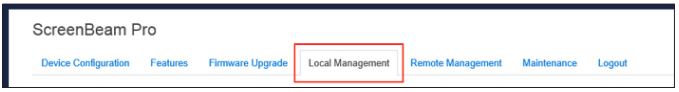


The Screensaver Image setting is configured.

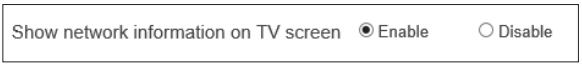
Setting Up Network Information Display

To show network information on the Receiver's display:

1. Click **Local Management**.

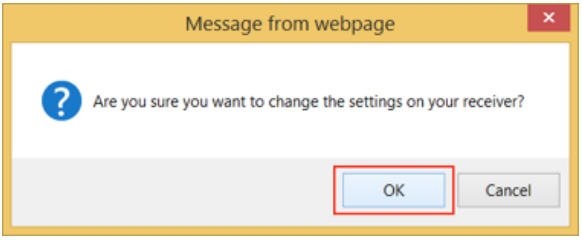


2. The *Local Management* window appears. Scroll down to the *Show network information on TV screen* options. Click in the *Enable* radio button.



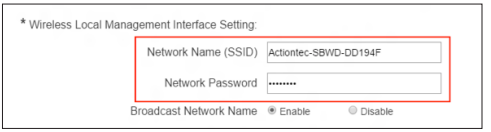
3. Click **Apply**.

4. In the *Message from webpage* window that appears, click **OK**.

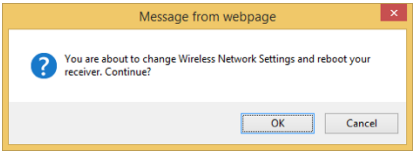


Modifying the Wireless Network Name (SSID)

1. Click **Local Management** from any web server screen, and then, in the *HDCP Encryption* list box, select the desired option.



2. Enter a new name in the *Network Name (SSID)* text box.
3. Enter a new password in the *Network Password* text box.
4. Click **Apply**, then click **OK** in the pop-up window.



After the Receiver reboots, the new network name and password will take effect.

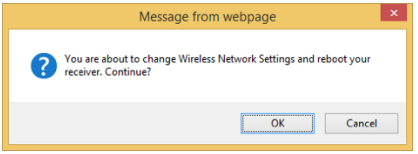
Modifying the Broadcast Network Name

1. Click **Local Management** from any web server screen, and then, in the *Broadcast Network Name* section, enable/disable option.

   By default, the Receiver is set not to broadcast its network name.

2. Enter a new name in the *Network Name (SSID)* text box.

3. Click **Apply**, then click **OK** in the pop-up window.



After the Receiver reboots, the new broadcast network name setting will take effect.

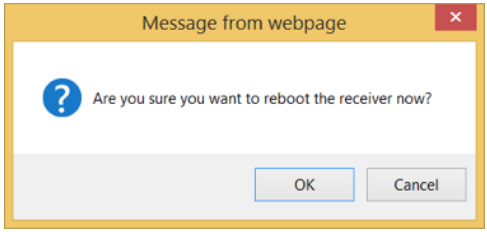
Rebooting the Receiver

To reboot the Receiver:

1. Click **Maintenance**.

2. The *Maintenance* window appears. Scroll down to the *Reboot Receiver* section, then click **Yes**.

3. In the *Message from webpage* window that appears, click **OK**.



The Receivter reboots.

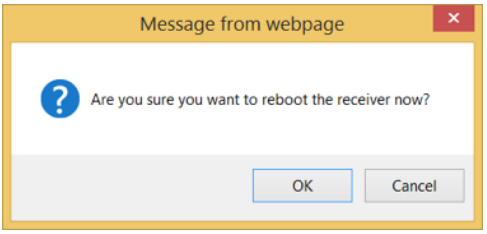
Resetting the Receiver to Factory Defaults

To reset the Receiver to its factory default settings:

1. Click **Maintenance**.

2. The *Maintenance* window appears. Scroll down to the *Reset Settings to Factory* section, then click **Yes**.

3. In the *Message from webpage* window that appears, click **OK**.



The Receiver reboots. When complete, the Receiver will be operating with its factory default settings. All custom settings are erased.

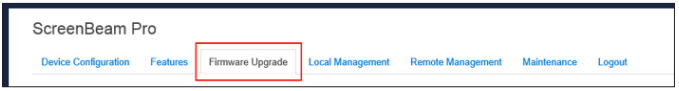
Updating the Receiver's Firmware

Actiontec periodically provides firmware updates to add functionality and/or eradicate bugs. To update the Receiver's firmware:

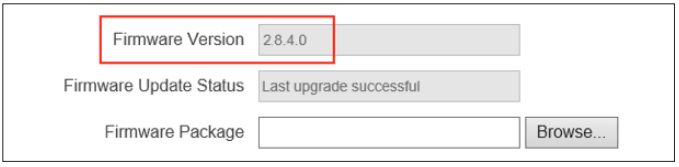
1. Download the latest firmware from the Actiontec website: http://www.actiontec.com/sbupdate

   Note: Be sure to disconnect from the Receiver's wireless network and connect to a router's wireless network before downloading the firmware

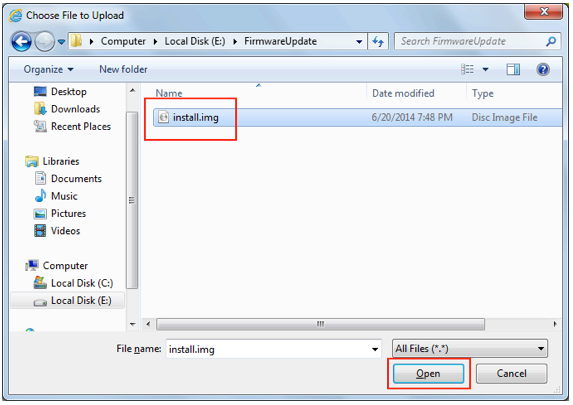
2. Log into the Receiver's web server and click **Firmware Upgrade**.



3. The *Firmware Upgrade* window appears. Check the current firmware in the *Firmware Version* section.

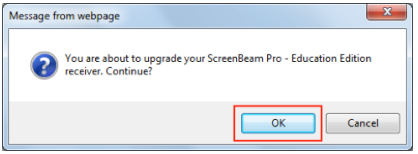


4. Click **Browse**. The *Choose File to Upload* window appears.

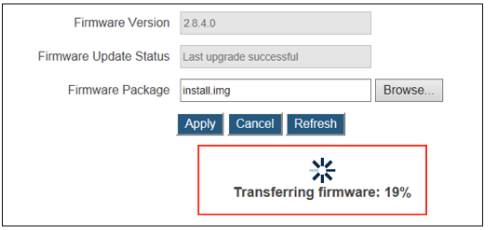


5. Select the firmware file (install.img), then click **Open**.

6. Click **Apply**, then click **OK** in the pop-up window.



7. Wait as the firmware file is uploaded.



8. The Receiver reboots and upgrades after the firmware file is uploaded.

9. The firmware upgrade is complete when the *Ready To Connect* screen reappears

Warning! Do not power off the Receiver or remove the USB flash drive while the update is in progress.

The Receiver's firmware is updated.

ScreenBeam Central Management System

5

ScreenBeam™ Wireless Display Receiver supports centralized management with Actiontec's ScreenBeam™ Central Management System (CMS), which can manage thousands of ScreenBeam Pro Receivers (including receiver grouping, configuration, firmware update, etc.)

Actiontec's ScreenBeam™ Central Management System is a full-featured software utility that remotely configures and manages ScreenBeam wireless display Receivers. After initial setup, the CMS utility will communicate over the network to each Receiver, allowing for full control of each unit. The CMS utility eases the burden of having to individually configure each Receiver in the network.

Note: ScreenBeam CMS, licensing, and network adapter are sold separately. Refer to http://www.actiontec.com/sbcms for more information.

Troubleshooting and FAQs

6

This chapter describes some problems you may encounter using ScreenBeam, and possible solutions to those problems. Also included are frequently asked questions (FAQs), and answers to those questions.

Troubleshooting

Operation Problems

The power doesn't turn on.

Check the power adapter. Make sure the power jack connector is connected to Receiver, and the power adapter is plugged in to a power outlet.

ScreenBeam Configuration Utility app does not work.

By design, the ScreenBeam Configuration Utility app cannot configure ScreenBeam Business, Education 2, and SMB Receivers. Contact IT to configure ScreenBeam settings.

Connection Problems

Cannot find Receiver on Windows 8.1 Project list.

1. Verify the Receiver is ON and connected to the Projector/TV.
2. Verify the Ready to Connect screen appears on the Projector/TV.

3. If the Receiver's name is not shown on the *Project* list:

   A. Swipe from the right to get to *Charms* menu.

   B. Select **Project**.

   C. Select **Add a wireless display**.

   D. Windows will search for available Receivers and display its findings in the *Searching for devices* list.

   E. Find the Receiver name that matches the name shown on the projector/TV.

4. If the Receiver still does not show up on the *Project* list:

   A. Turn off the wireless radio for 10 seconds, then turn it on again.

   B. Repeat substeps 3A-3E.

5. If Receiver does not show up on the *Project* list after trying steps 3 and 4:

   A. Restart Windows.

   B. Power cycle the Receiver by unplugging the power cable, then plugging it back again. Performing this action may require permission and assistance if device is managed by IT.

   C. Repeat substeps 3A-3E.

Cannot pair device to the Receiver.

1. Make sure the name of the connecting Receiver matches the Receiver name shown on the projector/TV screen.

2. If the *Force PIN Pairing* feature is not enabled on the Receiver, no PIN is needed and the device should automatically negotiate and connect. If it does not, the device may need a driver update. Contact IT for more information.

3. If the *Force PIN Pairing* feature is enabled on the Receiver, make the correct PIN is entered on the device.
   If the PIN is set to be randomly generated, it should appear on the projector/TV screen on the first connection attempt.
   If the PIN is set to static "secret," it will not appear on the projector/TV screen on the first connection attempt. Contact IT for the PIN. The default PIN is **12345670**.

4. If a *Time's Up* message appears on the screen, the PIN was not entered in time.

5. The device's Wi-Fi might be connected to access point operating on a *Dynamic Frequency Selection (DFS)* channel. The Receiver does not support *DFS* and may reject the connection/pairing attempt. To work around this:

   A. Remove the existing Receiver profile from the Windows 8.1 PC and devices list (PC and devices > Devices > Projectors > "Actiontec XXXX-SBWD100X").

   B. Disconnect Windows 8.1 device from the connected wireless network and make sure device is not connected to any other wireless network (Click on Wireless icon > Click on the wireless profile that shows Connected > Select Disconnect).

   C. Pair with the Receiver and verify PIN entry is correct (Devices > Project > Add a wireless display).

   D. Once connected to the Receiver, reconnect to the wireless network.

   E. Contact IT if the problem persists.

Cannot connect to the Receiver.

1. Verify the Receiver is powered on and connected to the projector/TV.

2. Verify the Receiver's *Ready to Connect* screen is shown on the projector/TV.

3. Make sure the name of the connected Receiver matches with the Receiver name shown on the projector/TV screen.

4. If the error message *Couldn't connect* is displayed in Windows:

   A. Disconnect the Windows 8.1 device from the connected wireless network and make sure the device is not connected to any other wireless network (Click on Wireless icon > Click on the wireless profile that shows Connected > Select Disconnect).

   B. Reconnect to the Receiver (Devices > Project > Select Receiver).

5. If the error message *Couldn't connect* is displayed and step 4 did not solve the problem:

   A. In the *Add Devices* list, scroll down to *Projectors* and identify the Receiver.

   C. Select the Receiver that matches the Receiver's name shown on projector/TV screen.

   D. Click **Remove** device and confirm.

   E. Scroll up, then click **Add a device**.

   F. Select the Receiver's name as shown on projector/TV's screen.

Connection drops occasionally.

The following tips and instructions are intended for IT personnel only.

1. Update the device's Intel Wi-Fi Network Adapter's driver to the latest version provided by the PC OEM or wireless manufacturer. Intel's latest Dual-Band Wi-Fi Network Adapter 72xx and 3260, and corresponding driver released on January 2015 are known to be best at handling DCM (Different Channel Mode). There should be little to no effect to the Miracast P2P when changes are made to the Infrastructure Wireless connection.

2. For devices with and older Wi-Fi Network Adapter, such as

   - Intel's Centrino 6xxx or similar series,
   - or Marvell's AVASTAR series,

   there are limitations to the driver and/or hardware, and the performance might not be as stable. If this is the case, try from one of the following procedures:

   - if Internet is not required, disconnect the device's Wi-Fi connection from wireless Internet SSID, then connect to the Receiver;

- if applicable, reconfigure the wireless network setting so the device does not roam from one access point to another;
- if applicable, from the Wi-Fi Network Adapter's *Device Properties*, set the *Roaming Aggressiveness* to lower value;
- or, check with wireless manufacturer or PC OEM for updated driver.

Cannot find the* Add a wireless display option *in Windows Project.

1. Turn of the wireless radio for 10 seconds, then turn it back on.
2. If step 1 doesn't work, restart Windows.
3. If steps 1 and 2 are unsuccessful, there may be a problem with the Windows operating system. Contact IT for support.

Video or Image Problems

Can't see video/image on projector or TV screen.

1. Make sure the projector/TV is turned on, and the correct HDMI input is selected for the Receiver.
2. If using the HDMI-to-VGA adapter, verify the HDMI connector is securely connected to Receiver, and the VGA cable is connected to the VGA adapter.
3. If the projector/TV screen is only showing a Windows desktop upon successful connection:
   - The device is currently projecting in *Extend* desktop mode. To use this mode, drag a screen from the device's desktop beyond the right edge of the display, and it will appear on the projector/TV screen.
   - To use *Duplicate* mode, press the keys Windows logo and P simultaneously, then select **Duplicate**.
4. If the screen is black upon a successful connection, and only the cursor appears, the device video driver may be corrupted. Contact IT to resolve the issue.

Snowy, or white, or static, or blank/black screen appears when powering the projector or TV on, and/or the* Ready to Connect *screen is not available.

1. Make sure one end of the HDMI cable is connected to the Receiver, and the other end is connected to the projector/TV.
2. If using the HDMI-to-VGA adapter, verify the HDMI connector is securely connected to Receiver, and the VGA cable is connected to the VGA adapter.
3. Power cycle the Receiver by unplugging the power cord, then plugging it back in. Performing this action may require permission and assistance if the device is managed by IT.
4. If the problem persists, contact IT for support.

Projected screen is not displaying in full resolution or viewing resolution is small.

Change the Windows display resolution setting to the highest possible resolution. Refer to the Windows instructions or contact IT for support.

Upon connecting to the Receiver, the display is too large and all four edges are cut off.

Adjust the video resolution setting on the projector/TV. If the problem persists, contact IT to adjust the Receiver's *OverScan* setting.

Video stuttering or image is pixelating.

1. If using the HDMI-to-VGA adapter, verify the HDMI connector is securely connected to the Receiver, and the VGA cable is connected to the VGA adapter.
2. If streaming video from the Internet, verify the video does not exhibit a similar issue prior to connecting to the Receiver.
3. If playing video from a media player app, verify the video does not exhibit a similar issue prior to connecting to Receiver.
4. Connect to a 5GHz network, rather than 2.4GHz (the default wireless network). Contact IT for information to make the 5GHz network the Receiver's default network.

Can't view Blu-ray or protected content when HDMI-to-VGA adapter is connected.

The HDMI-to-VGA adapter does not support playback of protected content.

Projector displays purple color.

1. If using the HDMI-to-VGA adapter, verify the HDMI connector is securely connected to the Receiver, and the VGA cable is connected to the VGA adapter.
2. The projector is set for the wrong type of incoming signal. The purple hue is caused by viewing an analog RGB signal in the YPbPr or component video mode. To fix this, change the Projector's *Signal Input* to either **Auto** or **Analog RGB**.
3. Enable the *VGA Compatibility* mode in the Receiver's settings. Contact IT for more information.

Audio Problems

Audio is cutting in and out occasionally or stuttering sound can be heard.

1. Verify the original media content does not have an issue prior to streaming to Receiver.
2. If using the HDMI-to-VGA adapter, make sure the 3.5mm audio connector is correctly plugged into the *Audio* port on the VGA adapter.
3. If Internet access is not required:

   A. Disconnect the Windows 8.1 device from the connected wireless network and make sure the device is not connected to any other wireless network (Click on Wireless icon > Click on the wireless profile that shows Connected > Select Disconnect).

   B. Reconnect to the Receiver (Devices > Project > Select Receiver).

   C. If the problem persists, contact IT.

Audio not coming from projector/external speakers, but from tablet/laptop.

The audio output setting in the Windows volume mixer is not set to use the correct output. To fix:

1. Connect the Windows device to the Receiver and ensure the desktop is displayed wirelessly.
2. Open *Volume Mixer* by right-clicking the speaker icon in the Windows task tray and selecting **Open Volume Mixer**.
3. In the *Device* column, select **Intel WiDi** from the drop-down menu beneath the speaker icon.
4. Check that the audio is coming from the projector/external speakers.

Frequently Asked Questions (FAQs)

Can my device connect to ScreenBeam?

To connect to ScreenBeam, your device must be Intel WiDi compatible or Wi-Fi Miracast-capable.

For a system to support Intel WiDi 3.5 (or later), it should have most if not all Intel chipsets (Processor, Graphic Card, and Wireless chipset). Here are some tips on the types of PC system that can support Intel WiDi.

- If your system is an Ultrabook (4th Gen Intel Core processor), it's most likely to support and have Intel WiDi 4.x preinstalled.
- If your system is an Ultrabook (3rd Gen Intel Core processor or older), it should have the required chipsets to support Intel WiDi. Update your drivers and download the Intel WiDi software at: http://www.intel.com/go/wirelessdisplayupdate.

- If your system is a laptop or notebook computer, it may support Intel WiDi if it meets the following requirements:

  Processor - One of the following processors is required:

  - 2nd generation Intel Core i3/i5/i7 Mobile Processor
  - 3rd Generation Intel Core i3/i5/i7 Mobile and Desktop Processor
  - 4th Generation Intel Core i3/i5/i7 Mobile and Desktop Processor
  - Intel Pentium N3510 Processor
  - Intel Celeron N2805 Processor
  - Intel Celeron N2810 Processor
  - Intel Celeron N2910 Processor
  - Intel Atom Z3740 Processor
  - Intel Atom Z3740D Processor
  - Intel Atom Z3770 Processor
  - Intel Atom Z3770D Processor

  Graphics - One of the following graphics solutions is required:

  - Intel Iris Pro Graphics 5200
  - Intel Iris Graphics 5100
  - Intel HD Graphics 5000
  - Intel HD Graphics 4600
  - Intel HD Graphics 4400
  - Intel HD Graphics 4200
  - Intel HD Graphics 4000
  - Intel HD Graphics 3000 (mobile)
  - Intel HD Graphics 2500
  - Intel HD Graphics 2000 (mobile)

Wireless Adapter - One of the following wireless adapters is required:

- Intel Centrino Wireless-N 1000, 1030, 2200, or 2230
- Intel Centrino Wireless-N 2200 for Desktop
- Intel Centrino Advanced-N 6200, 6205, 6230, or 6235
- Intel Centrino Advanced-N 6205 for Desktop
- Intel Centrino Wireless-N + WiMAX 6150
- Intel Centrino Advanced-N + WiMAX 6250
- Intel Centrino Ultimate-N 6300
- Intel Dual Band Wireless-N 7260
- Intel Dual Band Wireless-AC 7260
- Intel Dual Band Wireless-AC 7260 for Desktop
- Intel Dual Band Wireless-AC 3160
- Intel Wireless-N 7260
- Broadcom BCM43228
- Broadcom BCM43241
- Broadcom BCM4352

Operating System - One of the following operating systems is required:

- Microsoft Windows 7
- Microsoft Windows 8
- Microsoft Windows 8.1

- System requirements for Wi-Fi Miracast™

  Android 4.2

  Windows 8.1

- ScreenBeam is not compatible with Apple devices.

How can I tell if my device supports Wi-Fi Miracast?

Look for one of the following Miracast applications on your device. Only some application names are listed below. Different manufacturers may have different names for the Miracast apps on their products. But, it should indicate similar meaning.

- Wireless display
- Wireless mirroring
- Screen mirroring
- AllShareCast (Samsung devices only)
- Cast screen

See the ScreenBeam compatibility page for recommended Miracast devices.

Can I view protected content if the ScreenBeam Receiver is connected via an HDMI-to-VGA adapter?

No. The HDMI-to-VGA adapter does not support playback of protected content such as Blu-ray discs.

Do I need to install drivers/apps to use the ScreenBeam Receiver?

- For Windows 7/8, you may need to install the Intel WiDi (3.5 or higher) application.
- For Windows 8.1, you only need to install the latest Windows updates.
- For Android 4.2 or higher, no app is required.

  Note: Your device must be Intel® WiDi-compatible or Wi-Fi Miracast™-capable.

How can I improve my video/audio performance?

You can try the following methods to improve the ScreenBeam's video/audio performance:

- Place your device closer to ScreenBeam.
- Connect your device to a wireless network that is using a cleaner wireless channel or change the wireless channel on the current wireless network, and then connect the device to ScreenBeam.
- Turn off the Wi-Fi devices that are not in use currently.

What wireless signal range can I expect with ScreenBeam?

ScreenBeam is designed to be used in the same room with the source device. For best performance, the source device should be placed within 20 meters of ScreenBeam.

Do I need an existing wireless network to use ScreenBeam?

No. ScreenBeam connects directly with the Intel WiDi or Miracast™-enabled device, and no wireless network is needed. However, the source device needs to be connected to an Internet router or data network to view online content.

How can I upgrade ScreenBeam's firmware?

See "Updating the Receiver's Firmware" on page 42 for more information.

How do I configure ScreenBeam's general settings, such as changing language, rename ScreenBeam, enable/disable screensaver, and idling time for screensaver?

You can configure ScreenBeam's general settings wirelessly by using ScreenBeam's web server. See chapter 4, "Advanced Settings," on page 21, for more information about configuring ScreenBeam.

How can I adjust the display to fit properly to my TV screen?

See "Adjusting Screen Size" on page 33 for more information.

Can I extend my Windows desktop to the HDTV or Projector from my Intel WiDi device?

Yes. After the connection to ScreenBeam receiver is established, by default you should see the laptop screen mirrored to the HDTV or Projector.

To extend your Windows desktop to an HDTV or a Projector, press the Windows key and P key together, and select "Duplicate", "Extend" or "Second screen only" mode.

Where can I find more information and get support for Intel WiDi?

For more information about Intel Wireless Display, access this page: http://www.intel.com/p/en_US/support/highlights/wireless/wireless-display.

My device can support Intel WiDi. Where can I find Intel WiDi on my device? And where can I obtain the latest Intel WiDi application and graphic drivers for my Intel WiDi device?

In Windows, search for "Intel WiDi" and launch the application if you find it. If Intel WiDi software is not available on your system, go to http://www.intel.com/go/wirelessdisplayupdate and download the latest Intel WiDi software for your system. Make sure to also upgrade your system to the latest Graphics and Wireless drivers for best wireless display experience.

What is Wi-Fi Miracast™?

Wi-Fi Certified Miracast™ is a groundbreaking solution for seamlessly displaying video between devices, without cables or a network connection. Users can view pictures from a smartphone on a big screen television, share a laptop screen with the conference room projector in real-time, and watch live programs from a home cable box on a tablet. Miracast™ connections are formed using Wi-Fi Certified Wi-Fi Direct™, so access to a Wi-Fi® network is not needed–the ability to connect is inside Miracast™-certified devices.

What is Wi-Fi Direct and can I connect to ScreenBeam using Wi-Fi Direct?

Wi-Fi Direct is a peer-to-peer technology that Miracast™ connections are formed in. Even though some newer Android 4.0 and Windows 8.1 devices may detect ScreenBeam in the Wi-Fi Direct devices scan list, they will not be able to connect to ScreenBeam. The device must support Miracast™ to connect with ScreenBeam.

Can I connect to the Wi-Fi router and ScreenBeam simultaneously with my Intel WiDi laptop?

Yes. Connect the laptop to an available Wi-Fi router first, and then connect to ScreenBeam. You can then view online content and beam it to the HDTV.

Can I connect to the Wi-Fi router and ScreenBeam simultaneously with my Miracast™ device?

Some Miracast™ devices cannot connect to both the Wi-Fi router and ScreenBeam at the same time. Refer to the device manufacturer's or carrier's user manual for more information.

Can I connect several Intel WiDi or Miracast devices to ScreenBeam simultaneously?

No. You can connect one device to ScreenBeam at a time.

Can I connect to multiple ScreenBeam Receivers simultaneously?

No. You can only connect to one ScreenBeam Receiver at a time.

My TV/Projector does not have an HDMI Input. Can I still use ScreenBeam?

Yes. An HDMI-to-VGA adapter is included for compatibility with legacy display devices.

Can Microsoft Surface Pro tablet output Intel WiDi?

Originally, Microsoft Surface Pro does not support wireless display. However, it can support wireless display after you upgrade its operating system to Windows 8.1. The latest Microsoft Surface 2 and Surface Pro 2 with Windows 8.1 can support wireless display.

Can I use the ScreenBeam to access online content directly?

No. ScreenBeam does not directly connect to the Internet. You must use a source device (laptop/Utrabook/tablet/smartphone) to wirelessly stream the online content to your Receiver.

Can ScreenBeam support UoIP?

No.

Can I push media to ScreenBeam using DLNA?

No. ScreenBeam is not a DLNA media receiver.

Does ScreenBeam work with the Apple iPhone, iPad, or iPod?

No. ScreenBeam does not support Apple devices or the AirPlay protocol.

How to set my receiver to use the 5G frequency?

Generally, the 5G band can provide clearer channels, and ScreenBeam works in this band can produce better performance.

To set your receiver on the 5G band, you must prepare a 5G router first.
Note: not all routers support the 5G band. You can confirm this with the product manufacturer.

When a 5G router is available, connect your device to the 5G router first, and then connect your device to your receiver. Then your receiver will works in the 5G band.

How to identify if my device can connect to ScreenBeam?

ScreenBeam supports Intel WiDi ready and WiFi Certified Miracast devices.

- If the Intel WiDi (3.5 or higher) application is already installed on your device, your device can connect to ScreenBeam.
- If your device does not have Intel WiDi, try this simple method to check if your device supports Intel WiDi. Download the Intel WiDi (3.5 or higher) application and try installing it on your device. If it can be installed, your device supports Intel WiDi. If the application can't be installed, update the drivers of the graphic adapter and wireless adapter on your device first, and then install the application. If it can be installed, your device supports Intel WiDi. Otherwise, your device doesn't support Intel WiDi.
- To check if your device is Miracast enabled, check if the WiFi Certified Miracast logo is printed on the package of your device or directly on your device, or, if the wireless display app is available on your device. If yes, your device can connect to ScreenBeam.

Specifications

A

General

Language: English, French, German, Italian, Japanese, Simplified Chinese, Traditional Chinese, Russian, and Spanish
Dimensions: 3.07 x 2.95 x 0.79 inch (78 x 75 x 20 mm)

Video

H.264 compression
Supports up to full HD 1080p30 resolution

Audio

LPCM & AAC
Supports up to 5.1 channels

A/V interface

HDMI Type-A female connector
VGA via adapter (included)

Wireless

802.11 a/b/g/n Dual-band 2.4 & 5 GHz
WPA2, WPS virtual PBC, AES 128-bit

Content Protection

HDCP 2.x for HDMI

Electrical

Input: 5V/2A
Consumption: Less than 4W
LED Indicator: Power On

Firmware Upgrade

Wireless upgrade
USB

Certifications

Wi-Fi Miracast™
Intel® WiDi (Gen 5)

Regulatory Compliance

FCC, IC, UL, CE, SRRC, C-Tick, TELEC, RoHS, NCC, IDA, and WEEE
Warranty: Localized to country of sale

Environmental

Operating temperature: 0 ºC to 40 ºC (32 ºF to 104 ºF)
Storage temperature: 0 ºC to 70 ºC (32 ºF to 158 ºF)
Operating humidity: 10% to 85%, non-condensing
Storage humidity: 5% to 90%, non-condensing

HDMI-to-VGA (YZ-050)

Supports VGA output, 10-bit resolution up to 165MHz pixel rate of up to (1080p and UXGA)
Supports LPCM and compressed surround sound
Supports VGA output: 480I/P, 576I/P, 720P, 1080I/P, 640x480, 800x600, 1024x768, 1280x720, 1280x768, 1280x800, 1280x960, 1360x768, 1366x768, and 1920x1080
Does not support protected content playback

Compatibility

Intel WiDi-ready Ultrabooks, laptops, and tablets
Wi-Fi Miracast smartphones, tablets, and laptops running Windows 8.1 or Android 4.2 and higher
Non-WiDi/Miracast ready laptops and PCs with Actiontec USB Transmitter running Windows 7 and higher
Not compatible with Apple devices

System Requirements

Windows 8.1 or higher (with Miracast support)
Intel WiDi capable laptop or tablet with Intel WiDi 4 (and higher)
Wi-Fi Miracast capable smartphone, or tablet, or laptop

Note: Specifications are subject to change without notice.

Notices

B

Warranty

This product has a one-year Limited Hardware Warranty and 90-day free software updates from the date of purchase.

Local Law

This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country to country elsewhere in the world.

To the extent that this Limited Warranty Statement is inconsistent with local law, this Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer.

Go to **http://www.actiontec.com/products/warranty.php** for more information.

GPL Info

For GNU General Public License (GPL) related information, go to **http://opensource.actiontec.com**.

EU CE Declaration of Conformity

To obtain the complete Declaration of Conformity form in softcopy, go to the Actiontec Electronics Declarations of Conformity EU/EEA website at **http://international.actiontec.com/support/doc**.

The symbol below is placed in accordance with the European Union Directive 2002/96 on the Waste Electrical and Electronic Equipment (the WEEE Directive). If disposed of within the European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive.

Technical Support

Go to http://www.actiontec.com/sbupdate for product support, updates, and more information including:

- Firmware updates
- Troubleshooting
- Registration
- FAQs

Technical Support Phone Number

United States: 1-888-436-0657